



Lesson plan

Course Name: Economics II

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Topic: General equilibrium and microeconomic policy of the state, part II.

Course Objectives:

The aim of the second lecture is to explain the issue of the market failure. In the real economic world, there is an infinitude of perfect competition barriers, and causes of market failures that we can group into four basic groups: monopoly power, externalities, public goods and imperfect information.

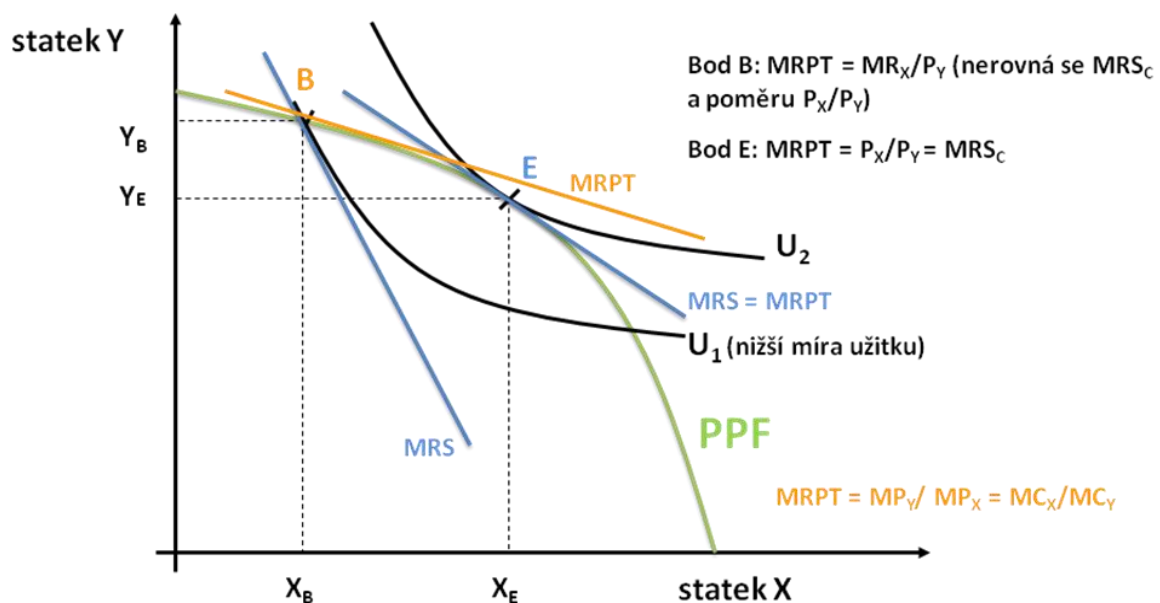
MARKET FAILURES

21. IMPERFECT COMPETITION (MONOPOLY POWER)

imperfect competition = situation in which economic subjects can **use their economic power in the price determining**. In this situation the relative prices do not reflect the relative marginal cost and the price system does not provide information necessary for ensuring efficiency.

For output of the profit maximising firms applies:

$$MRPT = MR_X/P_Y < P_X/P_Y = MRS, \text{ tzn. } MRPT < MRS$$



Monopoly power **would single criterion of decision-making of consumers and producers and, consequently, an efficient resources allocation mechanism.**

22. EXTERNALITIES

An externality - appears when *the production or consumption of the one subject causes unintended costs or benefits to another subject, without those who have caused cost or revenue, pay for them.*

Externalities may be positive or negative.

- **positive externalities**
- **negative externalities**

22.1 Externalities and efficiency conditions

Negative externalities: the manufacturer does not take them into account (and the price does not include) and the additional costs of production arise to other subjects (private, individual costs x social costs).

Efficiency conditions

Social marginal cost - SMC = private marginal cost of production (**MC**) + **external marginal cost - EMC**:

$$SMC = MC + EMC$$

Social rate of product transformation - SMRPT = degree to which a company could transform one goods in the second. It is determined by the ratio of the marginal costs in the production of the total y and X:

$$SMRPT = SMC_Y / SMC_X$$

Positive externalities: As a result, the **social marginal utilities – SMU**, consists of the private **marginal utility (MU)**, which the activity brings to its author and from the **external marginal utilities - EMU**, which receive other entities:

$$SMU = MU + EMU$$

Social marginal rate of substitution - SMRS = degree to which customers want to exchange good X to good Y. Efficient allocation requires:

$$SMRPT = SMRS$$

22.2 Negative externalities and inefficiency

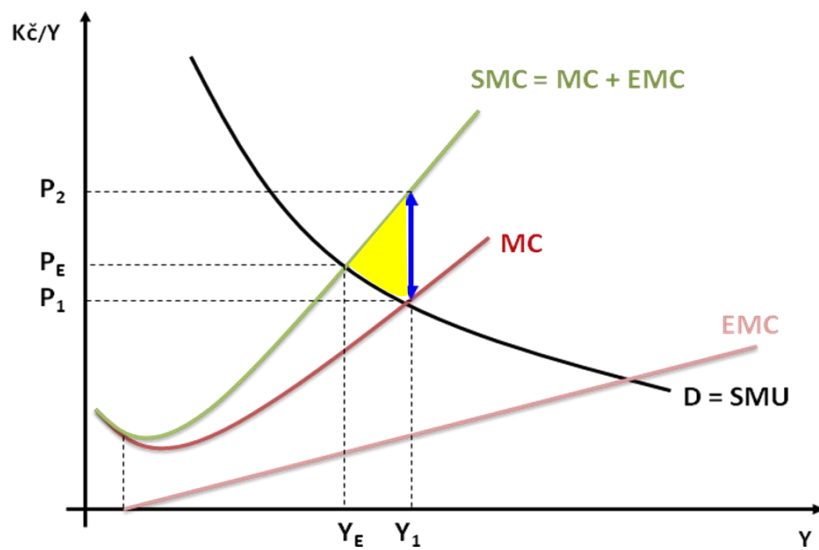
The existence of negative externalities is characterised by inequality:

$$MRPT = \frac{P_Y}{P_X} = SMRS$$

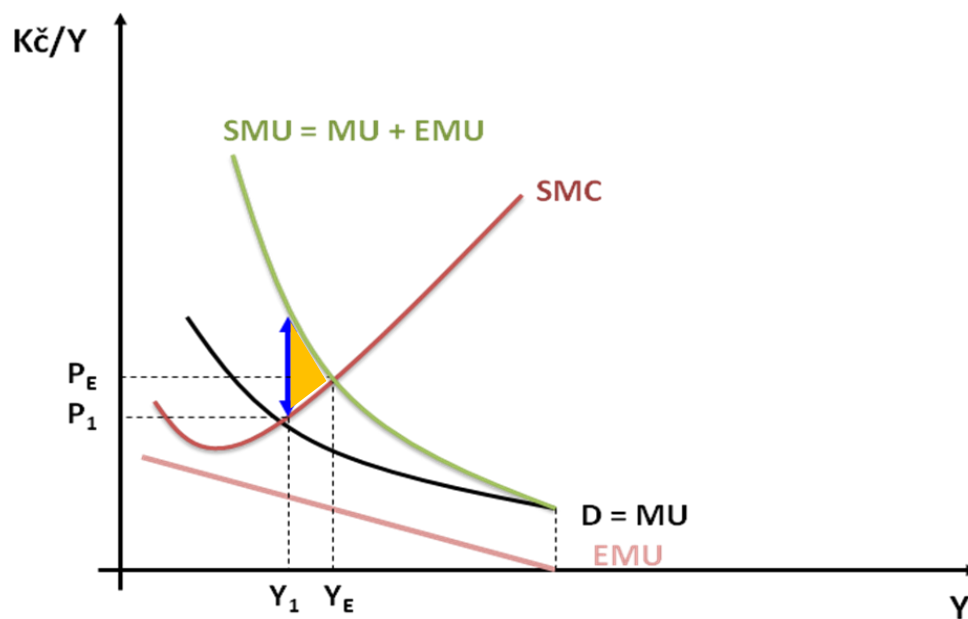
$$SMRPT > MRPT$$

$$SMRPT = \frac{SMC_Y}{SMC_X} > MRPT = \frac{MC_Y}{MC_X}$$

The private sector has a tendency to produce **too many goods** (which production is associated with negative externalities), **as the decision on the level of output is based on distorted** (undervalued) **costs**. The **source of inefficiency is inadequate output price**.



22.3 Positive externalities and inefficiency - *interpretation* performed, as through a graphical example.



23. PUBLIC GOODS

Public Goods = goods or services with typical characteristics:

- 1) ***noncompetitive consumption*** (irreducibility) - its consumption has no effect on the quantity of that good what may other consume (MC of the next provided public good are zero).
- 2) ***unexcludivity*** – it is unable to exclude from the consumption of the public good (or is intolerably costly).

We distinguish: ***public goods***, ***private goods*** and ***mixed goods***.

23.1 Public goods and effectiveness

The total ***marginal benefits from additional units public good is equal to the sum of benefits of all its members:***

$$SMU_V = MU_{V1} + MU_{V2} + \dots MU_{Vn}$$

Efficiency condition:

$$MRPT (V/ S) = SMRS (V/ S)$$

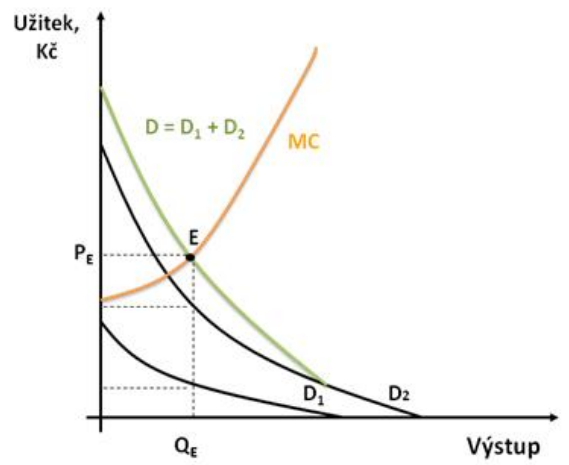
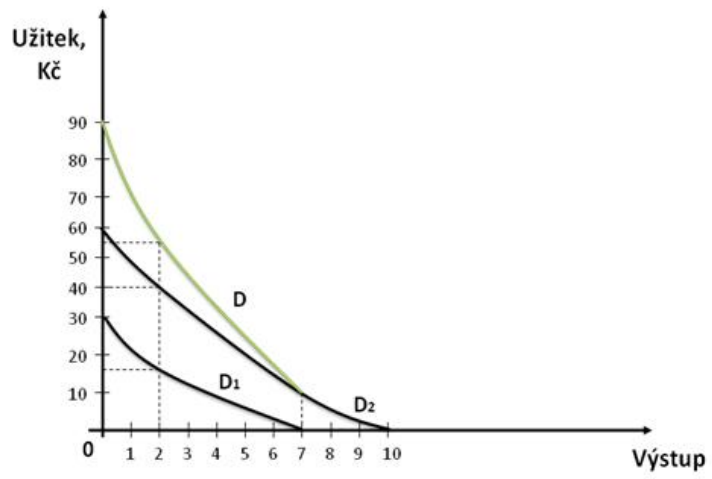
MRPT (V/S) = marginal rate transformation of the public good for the private good.

23.2 Optimum quantity of the public good

The market demand curve of the public good is ***pseudo-demand curve***.

The optimal quantity of the public good is in the point of intersection of the market demand curve with the supply curve. Public good supply curve is given by the marginal cost of production.

Public good is provided in the effective quantity only when the marginal utility equals the marginal cost: $MU = MC$



24. ASYMMETRIC INFORMATION

Asymmetric information = situation where one part of the market knows more than the other. As a result there is **clandestine activities** or **hidden information**:

- ❖ **clandestine activities** are those which cannot be precisely and without significant additional costs observed by others.
- ❖ **hidden information** are the situations in which one part of the market has more knowledge than the other.

Moral hazard and **adverse selection** are connected with the asymmetric information:

24.1 Moral hazard

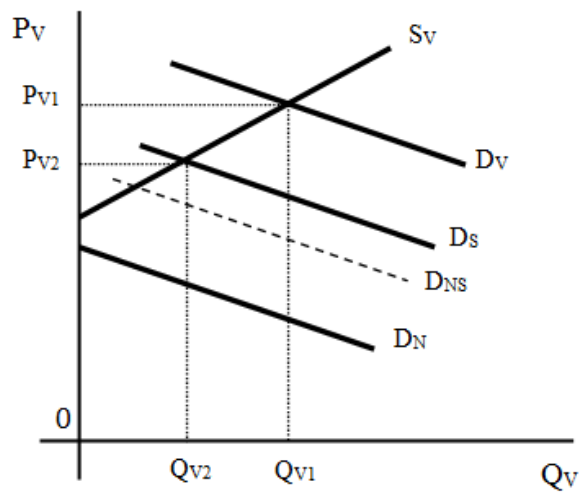
It is defined as an activity of informed economic subject which maximizes its benefit, **reduces benefits of other** (uninformed) subjects.

The most frequent example of **moral hazard** are situations where there is **relationship Principal-Agent**.

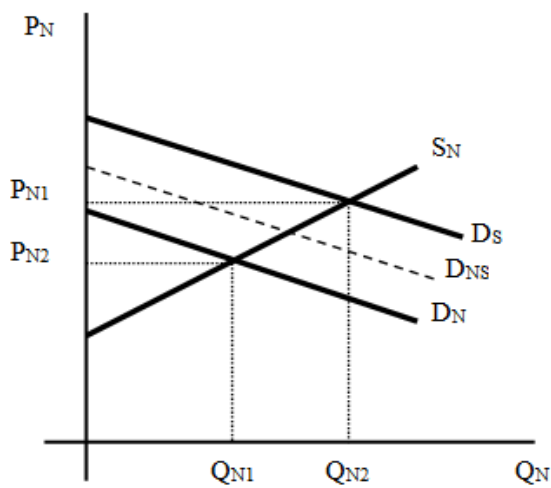
24.2 Adverse selection

- Adverse selection
- Asymmetric information

High quality car market



Low quality car market



24.3 Signalling behavior

Signals examples: Setting **high prices**, provide **longer production guarantees**, etc.

List of tasks for students:

Part "Market failure"

- 1. Explain the essence of the market failure and its causes.**
- 2. Analyze the imperfect competition (monopoly power) as the cause of the market failure.**
- 3. Explain the issue of positive and negative externalities as one of the market failure causes.**
- 4. Explain how public goods as the cause of the market failure and analyze an optimal amount of public good.**
- 5. Explain the problem of the asymmetric information.**
- 6. Explain the problem of the moral hazard and adverse selection.**